

Sequence Listing

<110> Baker, Kevin  
Botstein, David  
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Ferrara, Napoleone  
Filvaroff, Ellen  
Gerritsen, Mary  
Goddard, Audrey  
Godowski, Paul  
Grimaldi, Christopher  
Gurney, Austin  
Hillan, Kenneth  
Kljavin, Ivar  
Napier, Mary  
Roy, Margaret  
Tumas, Daniel  
Wood, William

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Pro Arg Ser His Phe Phe Pro Phe Asp Leu Phe Pro Met Cys Pro  
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Gly Leu Thr Ser Val Pro Thr Asn Ile Pro Phe Asp Thr Arg Met  
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185 190 195  
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Pro Leu Ile Arg His Arg Ala Leu Ala Ala Glu Thr Phe Ser Ala  
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Thr Leu Leu Thr Leu Ser Asp Thr Glu Asp Ser Leu His Phe Leu  
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Gln Val Pro Leu Arg Leu Gln Ile Leu His Gln Gly Gln Leu Leu  
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Glu Val Leu Pro Asn Leu Thr Val Gln Glu Met Asp Trp Leu Val

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Leu Gln Ser Val Leu Cys Gly Ala Asp Ala Leu Ile Pro Val Gln		
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Thr Gly Ala Ala Gly Ser Ala Ser Leu Thr Leu Leu Gly Asn Gly		
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Ser Leu Ile Tyr Gln Val Gln Val Val Gly Thr Ser Ser Glu Val		
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Thr Val Leu Cys His Met Ala Gly Leu Gln Pro Gly Gly His Thr		
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Trp Leu Ser Leu Asp Thr His Cys His Leu His Tyr Glu Val Leu		
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 695 700 705  
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 Gln Asp Val Arg Asp Leu Pro Gly Leu Pro Arg Ser Arg Asp Pro  
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<211> 737  
<212> PRT  
<213> Homo Sapien

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35 40 45  
Gly Pro Cys Ala Ala Gln Pro Cys Arg Asn Gly Gly Val Cys Thr  
50 55 60  
Ser Arg Pro Glu Pro Asp Pro Gln His Pro Ala Pro Ala Gly Glu  
65 70 75  
Pro Gly Tyr Ser Cys Thr Cys Pro Ala Gly Ile Ser Gly Ala Asn  
80 85 90  
Cys Gln Leu Val Ala Asp Pro Cys Ala Ser Asn Pro Cys His His  
95 100 105  
Gly Asn Cys Ser Ser Ser Ser Ser Ser Asp Gly Tyr Leu

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125	130	135
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140	145	150
Arg Gln Leu Gln Pro Val Pro Ala Thr Gln Glu Pro Asp Lys Ile		
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Leu Pro Arg Ser Gln Ala Thr Val Thr Leu Pro Thr Trp Gln Pro		
170	175	180
Lys Thr Gly Gln Lys Val Val Glu Met Lys Trp Asp Gln Val Glu		
185	190	195
Val Ile Pro Asp Ile Ala Cys Gly Asn Ala Ser Ser Asn Ser Ser		
200	205	210
Ala Gly Gly Arg Leu Val Ser Phe Glu Val Pro Gln Asn Thr Ser		
215	220	225
Val Lys Ile Arg Gln Asp Ala Thr Ala Ser Leu Ile Leu Leu Trp		
230	235	240
Lys Val Thr Ala Thr Gly Phe Gln Gln Cys Ser Leu Ile Asp Gly		
245	250	255
Arg Ser Val Thr Pro Leu Gln Ala Ser Gly Gly Leu Val Leu Leu		
260	265	270
Glu Glu Met Leu Ala Leu Gly Asn Asn His Phe Ile Gly Phe Val		
275	280	285
Asn Asp Ser Val Thr Lys Ser Ile Val Ala Leu Arg Leu Thr Leu		
290	295	300
Val Val Lys Val Ser Thr Cys Val Pro Gly Glu Ser His Ala Asn		
305	310	315
Asp Leu Glu Cys Ser Gly Lys Gly Lys Cys Thr Thr Lys Pro Ser		
320	325	330
Glu Ala Thr Phe Ser Cys Thr Cys Glu Glu Gln Tyr Val Gly Thr		
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Phe Cys Glu Glu Tyr Asp Ala Cys Gln Arg Lys Pro Cys Gln Asn		
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Asn Ala Ser Cys Ile Asp Ala Asn Glu Lys Gln Asp Gly Ser Asn		
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Phe Thr Cys Val Cys Leu Pro Gly Tyr Thr Gly Glu Leu Cys Gln		
380	385	390
Ser Lys Ile Asp Tyr Cys Ile Leu Asp Pro Cys Arg Asn Gly Ala		
395	400	405

Thr Cys Ile Ser Ser Leu Ser Gly Phe Thr Cys Gln Cys Pro Glu  
410 415 420

Gly Tyr Phe Gly Ser Ala Cys Glu Glu Lys Val Asp Pro Cys Ala  
425 430 435

Ser Ser Pro Cys Gln Asn Asn Gly Thr Cys Tyr Val Asp Gly Val  
440 445 450

His Phe Thr Cys Asn Cys Ser Pro Gly Phe Thr Gly Pro Thr Cys  
455 460 465

Ala Gln Leu Ile Asp Phe Cys Ala Leu Ser Pro Cys Ala His Gly  
470 475 480

Thr Cys Arg Ser Val Gly Thr Ser Tyr Lys Cys Leu Cys Asp Pro  
485 490 495

Gly Tyr His Gly Leu Tyr Cys Glu Glu Glu Tyr Asn Glu Cys Leu  
500 505 510

Ser Ala Pro Cys Leu Asn Ala Ala Thr Cys Arg Asp Leu Val Asn  
515 520 525

Gly Tyr Glu Cys Val Cys Leu Ala Glu Tyr Lys Gly Thr His Cys  
530 535 540

Glu Leu Tyr Lys Asp Pro Cys Ala Asn Val Ser Cys Leu Asn Gly  
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Ala Thr Cys Asp Ser Asp Gly Leu Asn Gly Thr Cys Ile Cys Ala  
560 565 570

Pro Gly Phe Thr Gly Glu Glu Cys Asp Ile Asp Ile Asn Glu Cys  
575 580 585

Asp Ser Asn Pro Cys His His Gly Gly Ser Cys Leu Asp Gln Pro  
590 595 600

Asn Gly Tyr Asn Cys His Cys Pro His Gly Trp Val Gly Ala Asn  
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Cys Glu Ile His Leu Gln Trp Lys Ser Gly His Met Ala Glu Ser  
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Leu Thr Asn Met Pro Arg His Ser Leu Tyr Ile Ile Ile Gly Ala  
635 640 645

Leu Cys Val Ala Phe Ile Leu Met Leu Ile Ile Leu Ile Val Gly  
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Ile Cys Arg Ile Ser Arg Ile Glu Tyr Gln Gly Ser Ser Arg Pro  
665 670 675

Ala Tyr Glu Glu Phe Tyr Asn Cys Arg Ser Ile Asp Ser Glu Phe  
680 685 690

Ser Asn Ala Ile Ala Ser Ile Arg His Ala Arg Phe Gly Lys Lys

695

700

705

Ser Arg Pro Ala Met Tyr Asp Val Ser Pro Ile Ala Tyr Glu Asp  
710 715 720

Tyr Ser Pro Asp Asp Lys Pro Leu Val Thr Leu Ile Lys Thr Lys  
725 730 735

Asp Leu

<210> 16

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 16

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<210> 17

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 17

caggaaacag ctatgaccac ctgcacacct gcaaattcat t 41

<210> 18

<211> 508

<212> DNA

<213> Homo Sapien

<400> 18

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acgaaagtgt gacccccctt tcaggcttcc agggggactg gtcctcctgg 100

aggagatgct cgccttgggg aataatcaact ttattggttt tgtgaatgtat 150

tctgtgacta agtctattgt ggcttgcgc ttaactctgg tggtaaggt 200

cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250

aaaaaggaaa atgcaccacg aagccgtcag agccaacttt ttccctgtacc 300

tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350

gaggaaaccc tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400

aagatggagc caatttcacc tgtgtttgcc ttccctggta tactggagag 450

ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500

tagggag 508

<210> 19  
<211> 508  
<212> DNA  
<213> Homo Sapien

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aggagatgct cgccctgggg aataatcaact ttattggttt tgtgaatgat 150  
tctgtgacta agtctattgt ggcttgcgcc ttaactctgg tggtaaggt 200  
cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtgttcag 250  
gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttccctgtacc 300  
tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350  
gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400  
aagatgggag caatttcacc tgtgtttgcc ttccctggta tactggagag 450  
cttgccaaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500

tagggag 508

<210> 20  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Probe

<400> 20  
ctctggaagg tcacggccac agg 23

<210> 21  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 21  
ctcagttcgg ttggcaaagc tctc 24

<210> 22  
<211> 69  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 22

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gctttgccaa ccgaactga 69

<210> 23

<211> 1520

<212> DNA

<213> Homo Sapien

<400> 23

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gccccacacca tgccgggcac ctacgctccc tcgaccacac tcagtagtcc 150  
cagcacccag ggcctgcaag agcaggcacg ggcctgtatg cgggacttcc 200  
cgctcgtgga cggccacaac gacctgcccc tggtcctaag gcaggtttac 250  
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<210> 24

<211> 433

<212> PRT

<213> Homo Sapien

<400> 24

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Pro	Leu	Val	Asp	Gly	His	Asn	Asp	Leu	Pro	Leu	Val	Leu	Arg	Gln
					35					40				45
Val	Tyr	Gln	Lys	Gly	Leu	Gln	Asp	Val	Asn	Leu	Arg	Asn	Phe	Ser
					50					55				60
Tyr	Gly	Gln	Thr	Ser	Leu	Asp	Arg	Leu	Arg	Asp	Gly	Leu	Val	Gly
					65				70					75
Ala	Gln	Phe	Trp	Ser	Ala	Tyr	Val	Pro	Cys	Gln	Thr	Gln	Asp	Arg
					80				85					90
Asp	Ala	Leu	Arg	Leu	Thr	Leu	Glu	Gln	Ile	Asp	Leu	Ile	Arg	Arg
					95				100					105
Met	Cys	Ala	Ser	Tyr	Ser	Glu	Leu	Glu	Leu	Val	Thr	Ser	Ala	Lys
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Ala	Leu	Asn	Asp	Thr	Gln	Lys	Leu	Ala	Cys	Leu	Ile	Gly	Val	Glu
					125				130					135
Gly	Gly	His	Ser	Leu	Asp	Asn	Ser	Leu	Ser	Ile	Leu	Arg	Thr	Phe
					140				145					150
Tyr	Met	Leu	Gly	Val	Arg	Tyr	Leu	Thr	Leu	Thr	His	Thr	Cys	Asn
					155				160					165
Thr	Pro	Trp	Ala	Glu	Ser	Ser	Ala	Lys	Gly	Val	His	Ser	Phe	Tyr
					170				175					180

Asn	Asn	Ile	Ser	Gly	Leu	Thr	Asp	Phe	Gly	Glu	Lys	Val	Val	Ala
					185				190				195	
Glu	Met	Asn	Arg	Leu	Gly	Met	Met	Val	Asp	Leu	Ser	His	Val	Ser
					200			205					210	
Asp	Ala	Val	Ala	Arg	Arg	Ala	Leu	Glu	Val	Ser	Gln	Ala	Pro	Val
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Ile	Phe	Ser	His	Ser	Ala	Ala	Arg	Gly	Val	Cys	Asn	Ser	Ala	Arg
					230			235					240	
Asn	Val	Pro	Asp	Asp	Ile	Leu	Gln	Leu	Leu	Lys	Lys	Asn	Gly	Gly
					245			250					255	
Val	Val	Met	Val	Ser	Leu	Ser	Met	Gly	Val	Ile	Gln	Cys	Asn	Pro
					260			265					270	
Ser	Ala	Asn	Val	Ser	Thr	Val	Ala	Asp	His	Phe	Asp	His	Ile	Lys
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Ala	Val	Ile	Gly	Ser	Lys	Phe	Ile	Gly	Ile	Gly	Gly	Asp	Tyr	Asp
					290			295					300	
Gly	Ala	Gly	Lys	Phe	Pro	Gln	Gly	Leu	Glu	Asp	Val	Ser	Thr	Tyr
					305			310					315	
Pro	Val	Leu	Ile	Glu	Glu	Leu	Leu	Ser	Arg	Gly	Trp	Ser	Glu	Glu
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Glu	Leu	Gln	Gly	Val	Leu	Arg	Gly	Asn	Leu	Leu	Arg	Val	Phe	Arg
					335			340					345	
Gln	Val	Glu	Lys	Val	Gln	Glu	Glu	Asn	Lys	Trp	Gln	Ser	Pro	Leu
					350			355					360	
Glu	Asp	Lys	Phe	Pro	Asp	Glu	Gln	Leu	Ser	Ser	Ser	Cys	His	Ser
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Asp	Leu	Ser	Arg	Leu	Arg	Gln	Arg	Gln	Ser	Leu	Thr	Ser	Gly	Gln
					380			385					390	
Glu	Leu	Thr	Glu	Ile	Pro	Ile	His	Trp	Thr	Ala	Lys	Leu	Pro	Ala
					395			400					405	
Lys	Trp	Ser	Val	Ser	Glu	Ser	Ser	Pro	His	Met	Ala	Pro	Val	Leu
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<210> 25  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 25  
agtttctggtc agcctatgtg cc 22

<210> 26  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 26  
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<210> 27  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 27  
ctccaccaat cccgatgaac ttgg 24

<210> 28  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 28  
gagcagattt acctcatacg ccgcattgtt gcctccatt ctgagctgga 50

<210> 29  
<211> 1416  
<212> DNA  
<213> Homo Sapien

<400> 29  
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<210> 30  
<211> 446  
<212> PRT  
<213> Homo Sapien

<400> 30  
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35 40 45  
Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser

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Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly		
65	70	75
Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg		
80	85	90
Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg		
95	100	105
Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys		
110	115	120
Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu		
125	130	135
Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe		
140	145	150
Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn		
155	160	165
Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr		
170	175	180
Asn Asn Ile Ser Gly Leu Thr Asp Phe Gly Glu Lys Val Val Ala		
185	190	195
Glu Met Asn Arg Leu Gly Met Met Val Asp Leu Ser His Val Ser		
200	205	210
Asp Ala Val Ala Arg Arg Ala Leu Glu Val Ser Gln Ala Pro Val		
215	220	225
Ile Phe Ser His Ser Ala Ala Arg Gly Val Cys Asn Ser Ala Arg		
230	235	240
Asn Val Pro Asp Asp Ile Leu Gln Leu Leu Lys Lys Asn Gly Gly		
245	250	255
Val Val Met Val Ser Leu Ser Met Gly Val Ile Gln Cys Asn Pro		
260	265	270
Ser Ala Asn Val Ser Thr Val Ala Asp His Phe Asp His Ile Lys		
275	280	285
Ala Val Ile Gly Ser Lys Phe Ile Gly Ile Gly Gly Asp Tyr Asp		
290	295	300
Gly Ala Gly Lys Phe Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr		
305	310	315
Pro Val Leu Ile Glu Glu Leu Leu Ser Arg Gly Trp Ser Glu Glu		
320	325	330
Glu Leu Gln Gly Val Leu Arg Gly Asn Leu Leu Arg Val Phe Arg		
335	340	345

Gln	Val	Glu	Lys	Val	Gln	Glu	Glu	Asn	Lys	Trp	Gln	Ser	Pro	Leu
				350					355					360
Glu	Asp	Lys	Phe	Pro	Asp	Glu	Gln	Leu	Ser	Ser	Ser	Cys	His	Ser
				365					370					375
Asp	Leu	Ser	Arg	Leu	Arg	Gln	Arg	Gln	Ser	Leu	Thr	Ser	Gly	Gln
				380					385					390
Glu	Leu	Thr	Glu	Ile	Pro	Ile	His	Trp	Thr	Ala	Lys	Leu	Pro	Ala
				395					400					405
Lys	Trp	Ser	Val	Ser	Glu	Ser	Ser	Pro	His	Pro	Asp	Lys	Thr	His
				410					415					420
Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser
				425					430					435
Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr				
				440					445					

<210> 31  
<211> 1790  
<212> DNA  
<213> Homo Sapien

<400> 31  
cgcccagcga cgtgcggcg gcctggcccg cgccctccccg cgcccgccct 50  
gcgtcccgcg ccctgcgcca cccgcgcgca gccgcagccc gcccgcgc 100  
cccgccagcg cccggcccat gcccgcggc cgccggggcc cccgcgc 150  
atccgcgcgg cggccgcgc cgttgctgcc cctgctgctg ctgctctgcg 200  
tcctcggggc gccgcgagcc ggatcaggag cccacacagc tgtgatcagt 250  
ccccaggatc ccacgcttct catcgctcc tccctgctgg ccacctgctc 300  
agtgcacgga gaccaccagg gagccaccgc cgagggcctc tactggaccc 350  
tcaacggcg cccgcctgccc cctgagctct cccgtgtact caacgcctcc 400  
accttggctc tggccctggc caacctcaat gggtccaggc agcggtcggg 450  
ggacaacctc gtgtgccacg cccgtgacgg cagcatcctg gctggctct 500  
gcctctatgt tggcctgccc ccagagaaac ccgtcaacat cagctgctgg 550  
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tgccacatcc ccaaggacct ggctctcttt acgcccattg agatctgggt 750  
ggaggccacc aaccgcctgg gctctgccccg ctccgatgta ctcacgctgg 800

atatcctgga tgtggtgacc acggacccccc cgcccgacgt gcacgtgagc 850  
cgcgtcgaaa gcctggagga ccagctgagc gtgcgctggg tgtcgccacc 900  
cgccctcaag gatttcctct ttcaagccaa ataccagatc cgctaccgag 950  
tggaggacag tgtggactgg aaggtggtgg acgatgttag caaccagacc 1000  
tcctgccgcc tggccggcct gaaacccggc accgtgtact tcgtgcaagt 1050  
gcgcgtcaac cccttggca tctatggctc caagaaagcc gggatctgga 1100  
gtgagtggag ccacccccaca gcccctcca ctcccccgag tgagcgcccg 1150  
ggcccgcccg gcggggcggt cgaaccgcgg ggccggagagc cgagctcggg 1200  
gccgggtgcgg cgcgagctca agcagttcct gggctggctc aagaagcacg 1250  
cgtactgctc caacccctcagc ttccgcctct acgaccagtg gcgcgcctgg 1300  
atgcagaagt cgcacaagac ccgcaaccag gacgagggga tcctgcctc 1350  
gggcagacgg ggcacggcga gaggtcctgc cagataagct gtaggggctc 1400  
aggccaccct ccctgccacg tggagacgca gagggccaaac ccaaactggg 1450  
gcacacctctg taccctcact tcagggcacc tgagccaccc tcagcaggag 1500  
ctgggggtggc ccctgagctc caacggccat aacagctctg actcccacgt 1550  
gaggccaccc ttgggtgcac cccagtggt gtgtgtgtgt gtgtgagggt 1600  
tggttgagtt gcctagaacc cctgccaggg ctgggggtga gaaggggagt 1650  
cattactccc cattacctag ggccctcca aaagagtctt ttaataaaa 1700  
tgagctattt aggtgctgtg attgtaaaaaaa aaaaaaaaaa 1750  
aaaaaaaaaaa aaaaaaaaaa aaaaacaaaa aaaaaaaaaa 1790

<210> 32  
<211> 422  
<212> PRT  
<213> Homo Sapien

<400> 32  
Met Pro Ala Gly Arg Arg Gly Pro Ala Ala Gln Ser Ala Arg Arg  
1 5 10 15  
Pro Pro Pro Leu Leu Pro Leu Leu Leu Leu Cys Val Leu Gly  
20 25 30  
Ala Pro Arg Ala Gly Ser Gly Ala His Thr Ala Val Ile Ser Pro  
35 40 45  
Gln Asp Pro Thr Leu Leu Ile Gly Ser Ser Leu Leu Ala Thr Cys  
50 55 60

Ser Val His Gly Asp Pro Pro Gly Ala Thr Ala Glu Gly Leu Tyr  
                   65                 70                 75  
 Trp Thr Leu Asn Gly Arg Arg Leu Pro Pro Glu Leu Ser Arg Val  
                   80                 85                 90  
 Leu Asn Ala Ser Thr Leu Ala Leu Ala Leu Ala Asn Leu Asn Gly  
                   95                 100                105  
 Ser Arg Gln Arg Ser Gly Asp Asn Leu Val Cys His Ala Arg Asp  
                   110                115                120  
 Gly Ser Ile Leu Ala Gly Ser Cys Leu Tyr Val Gly Leu Pro Pro  
                   125                130                135  
 Glu Lys Pro Val Asn Ile Ser Cys Trp Ser Lys Asn Met Lys Asp  
                   140                145                150  
 Leu Thr Cys Arg Trp Thr Pro Gly Ala His Gly Glu Thr Phe Leu  
                   155                160                165  
 His Thr Asn Tyr Ser Leu Lys Tyr Lys Leu Arg Trp Tyr Gly Gln  
                   170                175                180  
 Asp Asn Thr Cys Glu Glu Tyr His Thr Val Gly Pro His Ser Cys  
                   185                190                195  
 His Ile Pro Lys Asp Leu Ala Leu Phe Thr Pro Tyr Glu Ile Trp  
                   200                205                210  
 Val Glu Ala Thr Asn Arg Leu Gly Ser Ala Arg Ser Asp Val Leu  
                   215                220                225  
 Thr Leu Asp Ile Leu Asp Val Val Thr Thr Asp Pro Pro Pro Asp  
                   230                235                240  
 Val His Val Ser Arg Val Gly Gly Leu Glu Asp Gln Leu Ser Val  
                   245                250                255  
 Arg Trp Val Ser Pro Pro Ala Leu Lys Asp Phe Leu Phe Gln Ala  
                   260                265                270  
 Lys Tyr Gln Ile Arg Tyr Arg Val Glu Asp Ser Val Asp Trp Lys  
                   275                280                285  
 Val Val Asp Asp Val Ser Asn Gln Thr Ser Cys Arg Leu Ala Gly  
                   290                295                300  
 Leu Lys Pro Gly Thr Val Tyr Phe Val Gln Val Arg Cys Asn Pro  
                   305                310                315  
 Phe Gly Ile Tyr Gly Ser Lys Lys Ala Gly Ile Trp Ser Glu Trp  
                   320                325                330  
 Ser His Pro Thr Ala Ala Ser Thr Pro Arg Ser Glu Arg Pro Gly  
                   335                340                345  
 Pro Gly Gly Gly Ala Cys Glu Pro Arg Gly Gly Glu Pro Ser Ser

350                    355                    360  
Gly Pro Val Arg Arg Glu Leu Lys Gln Phe Leu Gly Trp Leu Lys  
365                    370                    375  
Lys His Ala Tyr Cys Ser Asn Leu Ser Phe Arg Leu Tyr Asp Gln  
380                    385                    390  
Trp Arg Ala Trp Met Gln Lys Ser His Lys Thr Arg Asn Gln Asp  
395                    400                    405  
Glu Gly Ile Leu Pro Ser Gly Arg Arg Gly Thr Ala Arg Gly Pro  
410                    415                    420  
Ala Arg

<210> 33  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 33  
cccgccccgac gtgcacgtga gcc 23

<210> 34  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 34  
tgagccagcc caggaactgc ttg 23

<210> 35  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 35  
caagtgcgct gcaaccctt tggcatctat ggctccaaga aagccggat 50

<210> 36  
<211> 1771  
<212> DNA  
<213> Homo Sapien

<400> 36  
cccacgcgtc cgctgggttt agatcgagca accctctaaa agcagtttag 50

agtggtaaaa aaaaaaaaaa acacaccaaa cgctcgagc cacaaaaggg 100  
atgaaatttc ttctggacat ctcctgtttt ctcccggtac tgatcgcttg 150  
ctcccttagag tccttcgtga agctttttat tcctaagagg agaaaatcag 200  
tcaccggcga aatcgctgtg attacaggag ctgggcattgg aattgggaga 250  
ctgactgcct atgaatttgc taaacttaaa agcaagctgg ttctctggga 300  
tataaataag catggactgg aggaaacagc tgccaaatgc aagggactgg 350  
gtgccaagg tcatcacccc gtggtagact gcagcaaccg agaagatatt 400  
tacagctctg caaagaaggt gaaggcagaa attggagatg ttagtatttt 450  
agtaaataat gctgggttag tctatacatc agatttgggtt gctacacaag 500  
atcctcagat tgaaaagact tttgaagttt atgtacttgc acatttctgg 550  
actacaaagg catttcttcc tgcaatgacg aagaataacc atggccatat 600  
tgtcactgtg gcttcggcag ctggacatgt ctgggtcccc ttcttactgg 650  
cttactgttc aagcaagttt gctgctgtt gatttcataa aactttgaca 700  
gatgaactgg ctgcottaca aataactgga gtcaaaacaa catgtctgtg 750  
tcctaatttc gtaaaacactg gtttcatcaa aaatccaagt acaagtttgg 800  
gaccctactt ggaacctgag gaagtggtaa acaggctgat gcatgggatt 850  
ctgactgagc agaagatgat ttttattcca tcttctatag ctttttaac 900  
aacattggaa aggatccttc ctgagcggtt cctggcagtt taaaaacgaa 950  
aaatcagtgt taagttttagt gcagtttattt gatataaaat gaaagcgcaa 1000  
taagcaccta gttttctgaa aactgattt ccaggttttag gttgatgtca 1050  
tctaatacgat ccagaattttt aatgtttgaa cttctgtttt ttcttaattat 1100  
ccccatttct tcaatatcat ttttgaggct ttggcagtct tcatttacta 1150  
ccacttgttc ttttagccaaa agctgattac atatgatata aacagagaaa 1200  
tacctttaga ggtgacttta aggaaaaatga agaaaaagaa ccaaaatgac 1250  
tttattaaaa taatttccaa gattatttgc ggctcacctg aaggcttgc 1300  
aaaatttgc ccataaccgt ttattnaca tatatttttta ttttgatttgc 1350  
cacttaaattt ttgtataattt tttgtttttt tttctgttct acataaaatc 1400  
agaaaacttca agctctctaa ataaaaatgaa ggactatatc tagtggtatt 1450  
tcacaatgaa tatcatgaac tctcaatggg taggtttcat cctaccattt 1500

gccactctgt ttcctgagag atacctcaca ttccaatgcc aaacatttct 1550  
gcacaggaa gctagaggtg gatacacgtg ttgcaagtat aaaagcatca 1600  
ctgggattta aggagaattg agagaatgta cccacaaaatg gcagcaataa 1650  
taaatggatc acacttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1750  
aaaaaaaaaa aaaaaaaaaa a 1771

<210> 37

<211> 300

<212> PRT

<213> Homo Sapien

<400> 37

Met	Lys	Phe	Leu	Leu	Asp	Ile	Leu	Leu	Leu	Pro	Leu	Leu	Ile	
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Val	Cys	Ser	Leu	Glu	Ser	Phe	Val	Lys	Leu	Phe	Ile	Pro	Lys	Arg
													30	
Arg	Lys	Ser	Val	Thr	Gly	Glu	Ile	Val	Leu	Ile	Thr	Gly	Ala	Gly
													45	
His	Gly	Ile	Gly	Arg	Leu	Thr	Ala	Tyr	Glu	Phe	Ala	Lys	Leu	Lys
													60	
Ser	Lys	Leu	Val	Leu	Trp	Asp	Ile	Asn	Lys	His	Gly	Leu	Glu	Glu
													75	
Thr	Ala	Ala	Lys	Cys	Lys	Gly	Leu	Gly	Ala	Lys	Val	His	Thr	Phe
													90	
Val	Val	Asp	Cys	Ser	Asn	Arg	Glu	Asp	Ile	Tyr	Ser	Ser	Ala	Lys
													105	
Lys	Val	Lys	Ala	Glu	Ile	Gly	Asp	Val	Ser	Ile	Leu	Val	Asn	Asn
													120	
Ala	Gly	Val	Val	Tyr	Thr	Ser	Asp	Leu	Phe	Ala	Thr	Gln	Asp	Pro
													135	
Gln	Ile	Glu	Lys	Thr	Phe	Glu	Val	Asn	Val	Leu	Ala	His	Phe	Trp
													150	
Thr	Thr	Lys	Ala	Phe	Leu	Pro	Ala	Met	Thr	Lys	Asn	Asn	His	Gly
													165	
His	Ile	Val	Thr	Val	Ala	Ser	Ala	Ala	Gly	His	Val	Ser	Val	Pro
													180	
Phe	Leu	Leu	Ala	Tyr	Cys	Ser	Ser	Lys	Phe	Ala	Ala	Val	Gly	Phe
													195	
His	Lys	Thr	Leu	Thr	Asp	Glu	Leu	Ala	Ala	Leu	Gln	Ile	Thr	Gly

200	205	210
Val Lys Thr Thr Cys Leu Cys Pro Asn Phe Val Asn Thr Gly Phe		
215	220	225
Ile Lys Asn Pro Ser Thr Ser Leu Gly Pro Thr Leu Glu Pro Glu		
230	235	240
Glu Val Val Asn Arg Leu Met His Gly Ile Leu Thr Glu Gln Lys		
245	250	255
Met Ile Phe Ile Pro Ser Ser Ile Ala Phe Leu Thr Thr Leu Glu		
260	265	270
Arg Ile Leu Pro Glu Arg Phe Leu Ala Val Leu Lys Arg Lys Ile		
275	280	285
Ser Val Lys Phe Asp Ala Val Ile Gly Tyr Lys Met Lys Ala Gln		
290	295	300

<210> 38  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 38  
ggtgaaggca gaaattggag atg 23

<210> 39  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 39  
atccccatgca tcagcctgtt tacc 24

<210> 40  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 40  
gctggtgtag tctatacatc agatttgttt gctacacaag atcctcag 48

<210> 41  
<211> 1377  
<212> DNA  
<213> Homo Sapien

<400> 41

gactagttct cttggagtct gggaggagga aagcggagcc ggcagggagc 50  
gaaccaggac tggggtgacg gcagggcagg gggcgctgg ccggggagaa 100  
gcgcgggggc tggagcacca ccaactggag ggtccggagt agcgagcgcc 150  
ccgaaggagg ccatcgggga gccgggaggg gggactgcga gaggacccc 200  
gcgtccgggc tccccgtgcc agcgctatga ggccactcct cgtcctgctg 250  
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cagcctctgc cggggcacc cggccttcc aggcacgccc ggccaccatg 350  
gcagccaggg cttggccggc cgcgatggcc gcgacggccg cgacggcg 400  
cccgggctc cgggagagaa aggcgagggc gggaggccgg gactgccgg 450  
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ccggcctgc cggggagtgc tcggtgccctc cgcgatccgc cttcagcgcc 550  
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ggccggccccc ttttctcaga gatcactcaa taaacctaag aaccctcata 1350  
aaaaaaaaaaa aaaaaaaaaa aaaaaaaa 1377

<210> 42

<211> 243  
<212> PRT  
<213> Homo Sapien

<400> 42

Met Arg Pro Leu Leu Val Leu Leu Leu Gly Leu Ala Ala Gly  
1 5 10 15

Ser Pro Pro Leu Asp Asp Asn Lys Ile Pro Ser Leu Cys Pro Gly  
20 25 30

His Pro Gly Leu Pro Gly Thr Pro Gly His His Gly Ser Gln Gly  
35 40 45

Leu Pro Gly Arg Asp Gly Arg Asp Gly Arg Asp Gly Ala Pro Gly  
50 55 60

Ala Pro Gly Glu Lys Gly Glu Gly Gly Arg Pro Gly Leu Pro Gly  
65 70 75

Pro Arg Gly Asp Pro Gly Pro Arg Gly Glu Ala Gly Pro Ala Gly  
80 85 90

Pro Thr Gly Pro Ala Gly Glu Cys Ser Val Pro Pro Arg Ser Ala  
95 100 105

Phe Ser Ala Lys Arg Ser Glu Ser Arg Val Pro Pro Pro Ser Asp  
110 115 120

Ala Pro Leu Pro Phe Asp Arg Val Leu Val Asn Glu Gln Gly His  
125 130 135

Tyr Asp Ala Val Thr Gly Lys Phe Thr Cys Gln Val Pro Gly Val  
140 145 150

Tyr Tyr Phe Ala Val His Ala Thr Val Tyr Arg Ala Ser Leu Gln  
155 160 165

Phe Asp Leu Val Lys Asn Gly Glu Ser Ile Ala Ser Phe Phe Gln  
170 175 180

Phe Phe Gly Gly Trp Pro Lys Pro Ala Ser Leu Ser Gly Gly Ala  
185 190 195

Met Val Arg Leu Glu Pro Glu Asp Gln Val Trp Val Gln Val Gly  
200 205 210

Val Gly Asp Tyr Ile Gly Ile Tyr Ala Ser Ile Lys Thr Asp Ser  
215 220 225

Thr Phe Ser Gly Phe Leu Val Tyr Ser Asp Trp His Ser Ser Pro  
230 235 240

Val Phe Ala

<210> 43  
<211> 24

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 43  
 tacaggccca gtcaggacca gggg 24

<210> 44  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 44  
 agccagcctc gctctcg 18

<210> 45  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 45  
 gtctgcgatc aggtctgg 18

<210> 46  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 46  
 gaaaaggcca atggattcgc 20

<210> 47  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 47  
 gacttacact tgccagcaca gcac 24

<210> 48  
<211> 45  
<212> DNA  
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<220>  
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<400> 48  
ggagcaccac caactggagg gtccggagta gcgagcgccc cgaag 45  
  
<210> 49  
<211> 1876  
<212> DNA  
<213> Homo Sapien  
  
<400> 49  
ctctttgtc caccagccca gcctgactcc tggagattgt gaatagctcc 50  
atccagcctg agaaacaaagc cgggtggctg agccaggctg tgcacggagc 100  
acctgacggg cccaacagac ccatgctgca tccagagacc tcccctggcc 150  
gggggcatct cctggctgtg ctccctggccc tccttggcac cacctgggca 200  
gaggtgtggc cacccagct gcaggagcag gctccgatgg ccggagccct 250  
gaacaggaag gagagttct tgctcctctc cctgcacaac cgccctgcgca 300  
gctgggtcca gccccctgcg gctgacatgc ggaggctgga ctggagtgac 350  
agcctggccc aactggctca agccaggca gcccctgtg gaatcccaac 400  
cccgagcctg gcatccggcc tgtggcgcac cctgcaagtg ggctggaaca 450  
tgtagctgct gccccgggc ttggcgtcct ttgttgaagt ggtcagccata 500  
tggttgcag aggggcagcg gtacagccac gcggcaggag agtgtgctcg 550  
caacgccacc tgccacccact acacgcagct cgtgtggcc acctaagcc 600  
agctgggctg tggccggcac ctgtgctctg caggccagac agcgatagaa 650  
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gacaatcatc ccctataaga agggtgcctg gtgttcgctc tgcacagcca 750  
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catcagcacc tgccactgcc actgtcccc tggctacacg ggcagatact 900  
gccaagtgag gtgcagcctg cagtgtgtgc acggccgggt ccgggaggag 950  
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caaggtgcat tttcccttcc acacctgtga cctgaggatc gacggagact 1050  
gcttcatggt gtcttcagag gcagacacct attacagagc caggatgaaa 1100  
tgtagagga aaggcggggt gctggcccaag atcaagagcc agaaagtgca 1150

ggacatcctc gccttctatc tggccgcct ggagaccacc aacgaggta 1200  
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accgccaagg actccttccg ctgggccaca ggggagcacc aggccttcac 1300  
cagtttgcc tttggcagc ctgacaacca cgggctggtg tggctgagt 1350  
ctgcccattggg gtttggcaac tgcgtggagc tgcaggcttc agctgccttc 1400  
aactggaacg accagcgctg caaaaacccga aaccgttaca tctgccagtt 1450  
tgcccaggag cacatctccc ggtggggccc agggcctga ggcctgacca 1500  
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ccacctgtct ggaacaaggg ccaggttaag accacatgcc tcatgtccaa 1600  
agaggtctca gaccttgac aatgccagaa gttggcaga gagaggcagg 1650  
gaggccagtg agggccaggg agtgagtgtt agaagaagct gggcccttc 1700  
gcctgctttt gattgggaag atgggcttca attagatggc gaaggagagg 1750  
acaccgcccag tggtccaaaa aggctgctct cttccacctg gcccagaccc 1800  
tgtggggcag cggagcttcc ctgtggcatg aaccccacgg ggtattaaat 1850  
tatgaatcag ctgaaaaaaaaaaaaa 1876

<210> 50

<211> 455

<212> PRT

<213> Homo Sapien

<400> 50

Met	Leu	His	Pro	Glu	Thr	Ser	Pro	Gly	Arg	Gly	His	Leu	Leu	Ala
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Val	Leu	Leu	Ala	Leu	Leu	Gly	Thr	Thr	Trp	Ala	Glu	Val	Trp	Pro
				20				25					30	
Pro	Gln	Leu	Gln	Glu	Gln	Ala	Pro	Met	Ala	Gly	Ala	Leu	Asn	Arg
				35				40					45	
Lys	Glu	Ser	Phe	Leu	Leu	Leu	Ser	Leu	His	Asn	Arg	Leu	Arg	Ser
				50				55					60	
Trp	Val	Gln	Pro	Pro	Ala	Ala	Asp	Met	Arg	Arg	Leu	Asp	Trp	Ser
				65				70					75	
Asp	Ser	Leu	Ala	Gln	Leu	Ala	Gln	Ala	Arg	Ala	Ala	Leu	Cys	Gly
				80				85					90	
Ile	Pro	Thr	Pro	Ser	Leu	Ala	Ser	Gly	Leu	Trp	Arg	Thr	Leu	Gln
				95				100					105	
Val	Gly	Trp	Asn	Met	Gln	Leu	Leu	Pro	Ala	Gly	Leu	Ala	Ser	Phe

110	115	120
Val Glu Val Val Ser Leu Trp Phe Ala Glu Gly Gln Arg Tyr Ser		
125	130	135
His Ala Ala Gly Glu Cys Ala Arg Asn Ala Thr Cys Thr His Tyr		
140	145	150
Thr Gln Leu Val Trp Ala Thr Ser Ser Gln Leu Gly Cys Gly Arg		
155	160	165
His Leu Cys Ser Ala Gly Gln Thr Ala Ile Glu Ala Phe Val Cys		
170	175	180
Ala Tyr Ser Pro Gly Gly Asn Trp Glu Val Asn Gly Lys Thr Ile		
185	190	195
Ile Pro Tyr Lys Lys Gly Ala Trp Cys Ser Leu Cys Thr Ala Ser		
200	205	210
Val Ser Gly Cys Phe Lys Ala Trp Asp His Ala Gly Gly Leu Cys		
215	220	225
Glu Val Pro Arg Asn Pro Cys Arg Met Ser Cys Gln Asn His Gly		
230	235	240
Arg Leu Asn Ile Ser Thr Cys His Cys His Cys Pro Pro Gly Tyr		
245	250	255
Thr Gly Arg Tyr Cys Gln Val Arg Cys Ser Leu Gln Cys Val His		
260	265	270
Gly Arg Phe Arg Glu Glu Cys Ser Cys Val Cys Asp Ile Gly		
275	280	285
Tyr Gly Gly Ala Gln Cys Ala Thr Lys Val His Phe Pro Phe His		
290	295	300
Thr Cys Asp Leu Arg Ile Asp Gly Asp Cys Phe Met Val Ser Ser		
305	310	315
Glu Ala Asp Thr Tyr Tyr Arg Ala Arg Met Lys Cys Gln Arg Lys		
320	325	330
Gly Gly Val Leu Ala Gln Ile Lys Ser Gln Lys Val Gln Asp Ile		
335	340	345
Leu Ala Phe Tyr Leu Gly Arg Leu Glu Thr Thr Asn Glu Val Thr		
350	355	360
Asp Ser Asp Phe Glu Thr Arg Asn Phe Trp Ile Gly Leu Thr Tyr		
365	370	375
Lys Thr Ala Lys Asp Ser Phe Arg Trp Ala Thr Gly Glu His Gln		
380	385	390
Ala Phe Thr Ser Phe Ala Phe Gly Gln Pro Asp Asn His Gly Leu		
395	400	405

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu  
410 415 420

Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr  
425 430 435

Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg  
440 445 450

Trp Gly Pro Gly Ser  
455

<210> 51

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 51

aggaacttct ggatcgggct cacc 24

<210> 52

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 52

gggtctgggc caggtggaag agag 24

<210> 53

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

gccaaggact cttcccgctg ggccacaggg gagcaccagg cttc 45

<210> 54

<211> 2331

<212> DNA

<213> Homo Sapien

<400> 54

cggacgcgtg ggctgggcgc tgcaaagcgt gtcccgccgg gtccccgagc 50

gtcccgcgcc ctgcgcgcgc catgctcctg ctgctggggc tgtgcctggg 100

gctgtccctg tgtgtggggc cgccaggaaga ggcgcagagc tggggccact 150

cttcggagca ggatggactc agggtcccga ggcaagtca gactgttgca 200

aggctgaaaa ccaaaccctt gatgacagaa ttctcagtga agtctaccat 250  
catttccgt tatgccttca ctacggttc ctgcagaatg ctgaacagag 300  
cttctgaaga ccaggacatt gagttccaga tgcagattcc agctgcagct 350  
ttcatcacca acttcactat gcttattgga gacaagggtgt atcagggcga 400  
aattacagag agagaaaaga agagtggtga taggtaaaa gagaaaagga 450  
ataaaaaccac agaagaaaat ggagagaagg ggactgaaat attcagagct 500  
tctgcagtga ttcccagcaa ggacaaagcc gccttttcc tgagttatga 550  
ggagcttctg cagaggggcc tggcaagta cgagcacagc atcagcgtgc 600  
ggccccagca gctgtccggg aggctgagcg tggacgtgaa tatcctggag 650  
agcgccggca tcgcattccct ggaggtgctg ccgcattcaca acagcaggca 700  
gaggggcagt gggcgccggg aagatgattc tggcctccc ccatctactg 750  
tcattaacca aaatgaaaaca tttgccaaca taattttaa acctactgta 800  
gtacaacaag ccaggattgc ccagaatgga attttggag acttttatcat 850  
tagatatgac gtcaatagag aacagagcat tggggacatc caggttctaa 900  
atggctattt tgtgcactac tttgctccta aagaccttcc tcctttaccc 950  
aagaatgtgg tattcgtgct tgacagcagt gcttctatgg tggAACCAA 1000  
actccggcag accaaggatg ccctcttac aattctccat gacctccgac 1050  
cccaggaccg tttcagtatc attggatttt ccaaccggat caaagtatgg 1100  
aaggaccact tgatatcagt cactccagac agcatcaggg atggaaaagt 1150  
gtacattcac catatgtcac ccactggagg cacagacatc aacggggccc 1200  
tgcagaggc catcaggctc ctcaacaagt acgtggccca cagtggcatt 1250  
ggagaccgga gcgtgtccct catcgcttc ctgacggatg ggaagccac 1300  
ggtcggggag acgcacaccc tcaagatcct caacaacacc cgagaggccg 1350  
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cgtgcacgag gaggaggacg caggctcgca gctcatcggt ttctacgatg 1500  
aaatcaggac cccgctctc tctgacatcc gcatcgatta tccccccagc 1550  
tcagtggtgc aggccaccaa gaccctgttc cccaaactact tcaacggctc 1600  
ggagatcatc attgcgggaa agctggtgga caggaagctg gatcacctgc 1650

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ggagctacct caccacaaag gagctgctga gtcctggct gcaaagtgac 1850  
gatgaaccgg agaaggagcg gtcgcggcag cggcccccagg ccctggctgt 1900  
gagctaccgc ttccctcaactc cttcacctc catgaagctg agggggccgg 1950  
tccccacgcat ggtatggcctg gaggaggccc acggcatgtc ggctgccatg 2000  
ggacccgaac cggtggtgca gagcgtgcga ggagctggca cgccagccagg 2050  
acctttgctc aagaagccaa actccgtcaa aaaaaaaca aacaaaaca 2100  
aaaaaaagaca tgggagagat ggtgttttc ctctccacca cctgggata 2150  
cgatgagaag atggccacct gcaagccagg aagacggccc tcaccagaca 2200  
ccatgtctgc tggcaccttg atcttgacc tcccaaccc cagaactgtg 2250  
agaaataaat gtgtttgtt taagctaaaa aaaaaaaaaa aaaaaaaaaa 2300  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 2331

<210> 55  
<211> 694  
<212> PRT  
<213> Homo Sapien

<400> 55  
Met Leu Leu Leu Leu Gly Leu Cys Leu Gly Leu Ser Leu Cys Val  
1 . . . . . 5 . . . . . 10 . . . . . 15  
  
Gly Ser Gln Glu Glu Ala Gln Ser Trp Gly His Ser Ser Glu Gln  
20 . . . . . 25 . . . . . 30 . . . . .  
  
Asp Gly Leu Arg Val Pro Arg Gln Val Arg Leu Leu Gln Arg Leu  
35 . . . . . 40 . . . . . 45 . . . . .  
  
Lys Thr Lys Pro Leu Met Thr Glu Phe Ser Val Lys Ser Thr Ile  
50 . . . . . 55 . . . . . 60 . . . . .  
  
Ile Ser Arg Tyr Ala Phe Thr Thr Val Ser Cys Arg Met Leu Asn  
65 . . . . . 70 . . . . . 75 . . . . .  
  
Arg Ala Ser Glu Asp Gln Asp Ile Glu Phe Gln Met Gln Ile Pro  
80 . . . . . 85 . . . . . 90 . . . . .  
  
Ala Ala Ala Phe Ile Thr Asn Phe Thr Met Leu Ile Gly Asp Lys  
95 . . . . . 100 . . . . . 105 . . . . .  
  
Val Tyr Gln Gly Glu Ile Thr Glu Arg Glu Lys Lys Ser Gly Asp  
110 . . . . . 115 . . . . . 120 . . . . .

Arg Val Lys Glu Lys Arg Asn Lys Thr Thr Glu Glu Asn Gly Glu  
                   125                  130                  135  
 Lys Gly Thr Glu Ile Phe Arg Ala Ser Ala Val Ile Pro Ser Lys  
                   140                  145                  150  
 Asp Lys Ala Ala Phe Phe Leu Ser Tyr Glu Glu Leu Leu Gln Arg  
                   155                  160                  165  
 Arg Leu Gly Lys Tyr Glu His Ser Ile Ser Val Arg Pro Gln Gln  
                   170                  175                  180  
 Leu Ser Gly Arg Leu Ser Val Asp Val Asn Ile Leu Glu Ser Ala  
                   185                  190                  195  
 Gly Ile Ala Ser Leu Glu Val Leu Pro Leu His Asn Ser Arg Gln  
                   200                  205                  210  
 Arg Gly Ser Gly Arg Gly Glu Asp Asp Ser Gly Pro Pro Pro Ser  
                   215                  220                  225  
 Thr Val Ile Asn Gln Asn Glu Thr Phe Ala Asn Ile Ile Phe Lys  
                   230                  235                  240  
 Pro Thr Val Val Gln Gln Ala Arg Ile Ala Gln Asn Gly Ile Leu  
                   245                  250                  255  
 Gly Asp Phe Ile Ile Arg Tyr Asp Val Asn Arg Glu Gln Ser Ile  
                   260                  265                  270  
 Gly Asp Ile Gln Val Leu Asn Gly Tyr Phe Val His Tyr Phe Ala  
                   275                  280                  285  
 Pro Lys Asp Leu Pro Pro Leu Pro Lys Asn Val Val Phe Val Leu  
                   290                  295                  300  
 Asp Ser Ser Ala Ser Met Val Gly Thr Lys Leu Arg Gln Thr Lys  
                   305                  310                  315  
 Asp Ala Leu Phe Thr Ile Leu His Asp Leu Arg Pro Gln Asp Arg  
                   320                  325                  330  
 Phe Ser Ile Ile Gly Phe Ser Asn Arg Ile Lys Val Trp Lys Asp  
                   335                  340                  345  
 His Leu Ile Ser Val Thr Pro Asp Ser Ile Arg Asp Gly Lys Val  
                   350                  355                  360  
 Tyr Ile His His Met Ser Pro Thr Gly Gly Thr Asp Ile Asn Gly  
                   365                  370                  375  
 Ala Leu Gln Arg Ala Ile Arg Leu Leu Asn Lys Tyr Val Ala His  
                   380                  385                  390  
 Ser Gly Ile Gly Asp Arg Ser Val Ser Leu Ile Val Phe Leu Thr  
                   395                  400                  405  
 Asp Gly Lys Pro Thr Val Gly Glu Thr His Thr Leu Lys Ile Leu

410	415	420
Asn Asn Thr Arg Glu Ala Ala Arg Gly Gln Val Cys Ile Phe Thr		
425	430	435
Ile Gly Ile Gly Asn Asp Val Asp Phe Arg Leu Leu Glu Lys Leu		
440	445	450
Ser Leu Glu Asn Cys Gly Leu Thr Arg Arg Val His Glu Glu Glu		
455	460	465
Asp Ala Gly Ser Gln Leu Ile Gly Phe Tyr Asp Glu Ile Arg Thr		
470	475	480
Pro Leu Leu Ser Asp Ile Arg Ile Asp Tyr Pro Pro Ser Ser Val		
485	490	495
Val Gln Ala Thr Lys Thr Leu Phe Pro Asn Tyr Phe Asn Gly Ser		
500	505	510
Glu Ile Ile Ile Ala Gly Lys Leu Val Asp Arg Lys Leu Asp His		
515	520	525
Leu His Val Glu Val Thr Ala Ser Asn Ser Lys Lys Phe Ile Ile		
530	535	540
Leu Lys Thr Asp Val Pro Val Arg Pro Gln Lys Ala Gly Lys Asp		
545	550	555
Val Thr Gly Ser Pro Arg Pro Gly Gly Asp Gly Glu Gly Asp Thr		
560	565	570
Asn His Ile Glu Arg Leu Trp Ser Tyr Leu Thr Thr Lys Glu Leu		
575	580	585
Leu Ser Ser Trp Leu Gln Ser Asp Asp Glu Pro Glu Lys Glu Arg		
590	595	600
Leu Arg Gln Arg Ala Gln Ala Leu Ala Val Ser Tyr Arg Phe Leu		
605	610	615
Thr Pro Phe Thr Ser Met Lys Leu Arg Gly Pro Val Pro Arg Met		
620	625	630
Asp Gly Leu Glu Glu Ala His Gly Met Ser Ala Ala Met Gly Pro		
635	640	645
Glu Pro Val Val Gln Ser Val Arg Gly Ala Gly Thr Gln Pro Gly		
650	655	660
Pro Leu Leu Lys Lys Pro Asn Ser Val Lys Lys Lys Gln Asn Lys		
665	670	675
Thr Lys Lys Arg His Gly Arg Asp Gly Val Phe Pro Leu His His		
680	685	690
Leu Gly Ile Arg		

<210> 56  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 56  
gtgggaacca aactccggca gacc 24

<210> 57  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 57  
cacatcgagc gtctctgg 18

<210> 58  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 58  
agccgctcct tctccggttc atcg 24

<210> 59  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 59  
tggaaaggacc acttgatatac agtcactcca gacagcatca gggatggg 48

<210> 60  
<211> 1413  
<212> DNA  
<213> Homo Sapien

<400> 60  
cggacgcgtg gggtgcccgta catggcgagt gtatgtctgc cgagcggatc 50  
ccagtggtcg gcggcagcgg cggcgccggc gcctccggg ctccggcttc 100  
tgctgttgct cttctccgccc gcggcactga tccccacagg ttagtggcag 150  
aatctgttta cgaaagacgt gacagtgtatc gagggagagg ttgcgaccat 200

cagttgccaa gtcaataaga gtgacgactc tgtgattcag ctactgaatc 250  
ccaacaggca gaccatttat ttcagggact tcagggcttt gaaggacagc 300  
aggttcagt tgctgaattt ttcttagcgt gaactcaaag tatcattgac 350  
aaacgtctca atttctgatg aaggaagata ctttgccag ctctataccg 400  
atcccccaca ggaaagttac accaccatca cagtcctggt cccaccacgt 450  
aatctgatga tcgatatcca gaaagacact gcggtgaaag gtgaggagat 500  
tgaagtcaac tgcactgcta tggccagcaa gccagccacg actatcaggt 550  
ggttcaaagg gaacacagag ctaaaaggca aatcgaggt ggaagagtgg 600  
tcagacatgt acactgtgac cagtcagctg atgctgaagg tgcacaagga 650  
ggacgatggg gtcccagtga tctgccaggt ggagcacccct gcggtcactg 700  
gaaacctgca gaccagcgg tatctagaag tacagtataa gcctcaagtg 750  
cacattcaga tgacttatcc tctacaaggc ttaacccggg aaggggacgc 800  
gcttgagtta acatgtgaag ccatcggaa gccccagcct gtgatggtaa 850  
cttgggtgag agtcgatgat gaaatgcctc aacacgcccgt actgtctggg 900  
cccaacctgt tcatcaataa cctaaacaaa acagataatg gtacataccg 950  
ctgtgaagct tcaaacatag tggggaaagc tcactcggat tatatgctgt 1000  
atgtatacga tccccccaca actatccctc ctccccacaac aaccaccacc 1050  
accaccacca ccaccaccac caccatcctt accatcatca cagattcccg 1100  
agcaggtgaa gaaggctcga tcagggcagt ggatcatgcc gtgatcggtg 1150  
gcgtcgtggc ggtgggtggc ttgcgcattgc tgtgcttgct catcattctg 1200  
ggcgctatt ttgcgcacaca taaaggtaca tacttcactc atgaagccaa 1250  
aggagccgat gacgcagcag acgcagacac agctataatc aatgcagaag 1300  
gaggacagaa caactccgaa gaaaagaaag agtacttcat ctagatcagc 1350  
cttttgttt caatgaggtg tccaaactggc cctatttgc tgataaagag 1400  
acagtgatat tgg 1413

<210> 61  
<211> 440  
<212> PRT  
<213> Homo Sapien

<400> 61  
Met Ala Ser Val Val Leu Pro Ser Gly Ser Gln Cys Ala Ala Ala  
1 5 10 15

Ala	Ala	Ala	Ala	Ala	Pro	Pro	Gly	Leu	Arg	Leu	Leu	Leu	Leu	Leu
					20				25					30
Phe	Ser	Ala	Ala	Ala	Leu	Ile	Pro	Thr	Gly	Asp	Gly	Gln	Asn	Leu
					35			40						45
Phe	Thr	Lys	Asp	Val	Thr	Val	Ile	Glu	Gly	Glu	Val	Ala	Thr	Ile
					50			55						60
Ser	Cys	Gln	Val	Asn	Lys	Ser	Asp	Asp	Ser	Val	Ile	Gln	Leu	Leu
					65			70						75
Asn	Pro	Asn	Arg	Gln	Thr	Ile	Tyr	Phe	Arg	Asp	Phe	Arg	Pro	Leu
					80			85						90
Lys	Asp	Ser	Arg	Phe	Gln	Leu	Leu	Asn	Phe	Ser	Ser	Ser	Glu	Leu
					95			100						105
Lys	Val	Ser	Leu	Thr	Asn	Val	Ser	Ile	Ser	Asp	Glu	Gly	Arg	Tyr
					110			115						120
Phe	Cys	Gln	Leu	Tyr	Thr	Asp	Pro	Pro	Gln	Glu	Ser	Tyr	Thr	Thr
					125			130						135
Ile	Thr	Val	Leu	Val	Pro	Pro	Arg	Asn	Leu	Met	Ile	Asp	Ile	Gln
					140			145						150
Lys	Asp	Thr	Ala	Val	Glu	Gly	Glu	Glu	Ile	Glu	Val	Asn	Cys	Thr
					155			160						165
Ala	Met	Ala	Ser	Lys	Pro	Ala	Thr	Thr	Ile	Arg	Trp	Phe	Lys	Gly
					170			175						180
Asn	Thr	Glu	Leu	Lys	Gly	Lys	Ser	Glu	Val	Glu	Glu	Trp	Ser	Asp
					185			190						195
Met	Tyr	Thr	Val	Thr	Ser	Gln	Leu	Met	Leu	Lys	Val	His	Lys	Glu
					200			205						210
Asp	Asp	Gly	Val	Pro	Val	Ile	Cys	Gln	Val	Glu	His	Pro	Ala	Val
					215			220						225
Thr	Gly	Asn	Leu	Gln	Thr	Gln	Arg	Tyr	Leu	Glu	Val	Gln	Tyr	Lys
					230			235						240
Pro	Gln	Val	His	Ile	Gln	Met	Thr	Tyr	Pro	Leu	Gln	Gly	Leu	Thr
					245			250						255
Arg	Glu	Gly	Asp	Ala	Leu	Glu	Leu	Thr	Cys	Glu	Ala	Ile	Gly	Lys
					260			265						270
Pro	Gln	Pro	Val	Met	Val	Thr	Trp	Val	Arg	Val	Asp	Asp	Glu	Met
					275			280						285
Pro	Gln	His	Ala	Val	Leu	Ser	Gly	Pro	Asn	Leu	Phe	Ile	Asn	Asn
					290			295						300
Leu	Asn	Lys	Thr	Asp	Asn	Gly	Thr	Tyr	Arg	Cys	Glu	Ala	Ser	Asn

305	310	315
Ile Val Gly Lys Ala His Ser Asp Tyr Met Leu Tyr Val Tyr Asp		
320	325	330
Pro Pro Thr Thr Ile Pro Pro Pro Thr Thr Thr Thr Thr Thr		
335	340	345
Thr Thr Thr Thr Thr Ile Leu Thr Ile Ile Thr Asp Ser Arg		
350	355	360
Ala Gly Glu Glu Gly Ser Ile Arg Ala Val Asp His Ala Val Ile		
365	370	375
Gly Gly Val Val Ala Val Val Phe Ala Met Leu Cys Leu Leu		
380	385	390
Ile Ile Leu Gly Arg Tyr Phe Ala Arg His Lys Gly Thr Tyr Phe		
395	400	405
Thr His Glu Ala Lys Gly Ala Asp Asp Ala Ala Asp Ala Asp Thr		
410	415	420
Ala Ile Ile Asn Ala Glu Gly Gly Gln Asn Asn Ser Glu Glu Lys		
425	430	435
Lys Glu Tyr Phe Ile		
440		

<210> 62  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 62  
ggcttctgct gttgctcttc tccg 24

<210> 63  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 63  
gtacactgtg accagtcagc 20

<210> 64  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 64  
atcatcacag attcccgagc 20

<210> 65  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 65  
ttcaatctcc tcacaccttcca ccgc 24

<210> 66  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 66  
atagctgtgt ctgcgtctgc tgcg 24

<210> 67  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 67  
cgcgccactg atccccacag gtgatgggca gaatctgttt acgaaagacg 50

<210> 68  
<211> 2555  
<212> DNA  
<213> Homo Sapien

<400> 68  
ggggcggttg gacgcggact cgaacgcagt tgcttcggga cccaggaccc 50  
cctcgccccc gacccgcccag gaaagactga ggccgcggcc tgccccgccc 100  
ggctccctgc gccgcgcgcg cctcccgaaa cagaagatgt gctccaggg 150  
ccctctgttg ctgccgtgc tcctgtact ggccctgggg cctgggggtgc 200  
agggctgccc atccggctgc cagtgccagcc agccacagac agtcttctgc 250  
actgcccggcc aggggaccac ggtgccccga gacgtgccac ccgacacgg 300  
ggggctgtac gtcttgaga acggcatcac catgctcgac gcaaggagct 350  
ttgccggccct gccgggcctg cagtcctgg acctgtcaca gaaccagatc 400

gccagcctgc gcctgccccg cctgctgctg ctggacctca gccacaacag 450  
cctcctggcc ctggagcccg gcatcctgga cactgccaac gtggaggcgc 500  
tgccggctggc tggctctgggg ctgcagcagc tggacgaggg gctttcagc 550  
cgcttgcgca acctccacga cctggatgtg tccgacaacc agctggagcg 600  
agtgccacct gtgatccgag gcctccgggg cctgacgcgc ctgcggctgg 650  
ccggcaacac ccgcattgcc cagctgcggc ccgaggacct ggccggcttg 700  
gctgccctgc aggagctgga tgtgagcaac ctaagcctgc aggccctgcc 750  
tggcgacctc tcgggcctct tcccccgctt gcggctgctg gcagctgccc 800  
gcaaccctt caactgcgtg tgccccctga gctggtttg 850  
cgcgagagcc acgtcacact ggccagccct gaggagacgc gctgccactt 900  
cccggccaaag aacgctggcc ggctgctctt ggagcttgac tacgcccact 950  
ttggctgccc agccaccacc accacagcca cagtgcac cacgaggccc 1000  
gtgggtcgaaa agccacacgc cttgtcttctt agcttggctc ctacctggct 1050  
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<210> 69

<211> 598

<212> PRT

<213> Homö Sapien

<400> 69

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Ala	Leu	Gly	Pro	Gly	Val	Gln	Gly	Cys	Pro	Ser	Gly	Cys	Gln	Cys
					20				25					30

Ser	Gln	Pro	Gln	Thr	Val	Phe	Cys	Thr	Ala	Arg	Gln	Gly	Thr	Thr
					35			40						45

Val	Pro	Arg	Asp	Val	Pro	Pro	Asp	Thr	Val	Gly	Leu	Tyr	Val	Phe
				50					55					60

Glu	Asn	Gly	Ile	Thr	Met	Leu	Asp	Ala	Ser	Ser	Phe	Ala	Gly	Leu
					65				70					75

Pro	Gly	Leu	Gln	Leu	Leu	Asp	Leu	Ser	Gln	Asn	Gln	Ile	Ala	Ser
				80				85						90

Leu	Arg	Leu	Pro	Arg	Leu	Leu	Leu	Asp	Leu	Ser	His	Asn	Ser	
					95				100					105

Leu Leu Ala Leu Glu Pro Gly Ile Leu Asp Thr Ala Asn Val Glu

110	115	120
Ala Leu Arg Leu Ala Gly Leu Gly Leu Gln Gln Leu Asp Glu Gly		
125	130	135
Leu Phe Ser Arg Leu Arg Asn Leu His Asp Leu Asp Val Ser Asp		
140	145	150
Asn Gln Leu Glu Arg Val Pro Pro Val Ile Arg Gly Leu Arg Gly		
155	160	165
Leu Thr Arg Leu Arg Leu Ala Gly Asn Thr Arg Ile Ala Gln Leu		
170	175	180
Arg Pro Glu Asp Leu Ala Gly Leu Ala Ala Leu Gln Glu Leu Asp		
185	190	195
Val Ser Asn Leu Ser Leu Gln Ala Leu Pro Gly Asp Leu Ser Gly		
200	205	210
Leu Phe Pro Arg Leu Arg Leu Leu Ala Ala Ala Arg Asn Pro Phe		
215	220	225
Asn Cys Val Cys Pro Leu Ser Trp Phe Gly Pro Trp Val Arg Glu		
230	235	240
Ser His Val Thr Leu Ala Ser Pro Glu Glu Thr Arg Cys His Phe		
245	250	255
Pro Pro Lys Asn Ala Gly Arg Leu Leu Leu Glu Leu Asp Tyr Ala		
260	265	270
Asp Phe Gly Cys Pro Ala Thr Thr Thr Ala Thr Val Pro Thr		
275	280	285
Thr Arg Pro Val Val Arg Glu Pro Thr Ala Leu Ser Ser Ser Leu		
290	295	300
Ala Pro Thr Trp Leu Ser Pro Thr Ala Pro Ala Thr Glu Ala Pro		
305	310	315
Ser Pro Pro Ser Thr Ala Pro Pro Thr Val Gly Pro Val Pro Gln		
320	325	330
Pro Gln Asp Cys Pro Pro Ser Thr Cys Leu Asn Gly Gly Thr Cys		
335	340	345
His Leu Gly Thr Arg His His Leu Ala Cys Leu Cys Pro Glu Gly		
350	355	360
Phe Thr Gly Leu Tyr Cys Glu Ser Gln Met Gly Gln Gly Thr Arg		
365	370	375
Pro Ser Pro Thr Pro Val Thr Pro Arg Pro Pro Arg Ser Leu Thr		
380	385	390
Leu Gly Ile Glu Pro Val Ser Pro Thr Ser Leu Arg Val Gly Leu		
395	400	405

Gln Arg Tyr Leu Gln Gly Ser Ser Val Gln Leu Arg Ser Leu Arg  
410 415 420

Leu Thr Tyr Arg Asn Leu Ser Gly Pro Asp Lys Arg Leu Val Thr  
425 430 435

Leu Arg Leu Pro Ala Ser Leu Ala Glu Tyr Thr Val Thr Gln Leu  
440 445 450

Arg Pro Asn Ala Thr Tyr Ser Val Cys Val Met Pro Leu Gly Pro  
455 460 465

Gly Arg Val Pro Glu Gly Glu Ala Cys Gly Glu Ala His Thr  
470 475 480

Pro Pro Ala Val His Ser Asn His Ala Pro Val Thr Gln Ala Arg  
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Glu Gly Asn Leu Pro Leu Leu Ile Ala Pro Ala Leu Ala Ala Val  
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Leu Leu Ala Ala Leu Ala Ala Val Gly Ala Ala Tyr Cys Val Arg  
515 520 525

Arg Gly Arg Ala Met Ala Ala Ala Gln Asp Lys Gly Gln Val  
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Gly Pro Gly Ala Gly Pro Leu Glu Leu Glu Gly Val Lys Val Pro  
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Leu Glu Pro Gly Pro Lys Ala Thr Glu Gly Gly Glu Ala Leu  
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Pro Ser Gly Ser Glu Cys Glu Val Pro Leu Met Gly Phe Pro Gly  
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Pro Gly Leu Gln Ser Pro Leu His Ala Lys Pro Tyr Ile  
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<210> 70  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 70  
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<210> 71  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 71  
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<210> 72  
<211> 25  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 72  
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<210> 73  
<211> 45  
<212> DNA  
<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe

<400> 73  
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<210> 74  
<211> 45  
<212> DNA  
<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

<400> 74  
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<210> 75  
<211> 1077  
<212> DNA  
<213> Homo Sapien

<400> 75  
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ggcctccagg caacatgggg ggcccagtca gagagccggc actctcagtt 200  
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gccggctgca ggggacagga ggcccctccc agaatgggga agggtatccc 350  
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<210> 76  
<211> 250  
<212> PRT  
<213> Homo Sapien

<400> 76

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Leu	Trp	Leu	Ser	Trp	Gly	Ala	Ala	Leu	Gly	Ala	Val	Ala	Cys	Ala
														45
Met	Ala	Leu	Leu	Thr	Gln	Gln	Thr	Glu	Leu	Gln	Ser	Leu	Arg	Arg
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Glu	Val	Ser	Arg	Leu	Gln	Gly	Thr	Gly	Gly	Pro	Ser	Gln	Asn	Gly
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Glu	Gly	Tyr	Pro	Trp	Gln	Ser	Leu	Pro	Glu	Gln	Ser	Ser	Asp	Ala
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Leu	Glu	Ala	Trp	Glu	Asn	Gly	Glu	Arg	Ser	Arg	Lys	Arg	Arg	Ala
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Val	Leu	Thr	Gln	Lys	Gln	Lys	Lys	Gln	His	Ser	Val	Leu	His	Leu
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110														115

Val	Pro	Ile	Asn	Ala	Thr	Ser	Lys	Asp	Asp	Ser	Asp	Val	Thr	Glu
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Val	Met	Trp	Gln	Pro	Ala	Leu	Arg	Arg	Gly	Arg	Gly	Leu	Gln	Ala
					140				145					150
Gln	Gly	Tyr	Gly	Val	Arg	Ile	Gln	Asp	Ala	Gly	Val	Tyr	Leu	Leu
					155				160					165
Tyr	Ser	Gln	Val	Leu	Phe	Gln	Asp	Val	Thr	Phe	Thr	Met	Gly	Gln
					170				175					180
Val	Val	Ser	Arg	Glu	Gly	Gln	Gly	Arg	Gln	Glu	Thr	Leu	Phe	Arg
				185					190					195
Cys	Ile	Arg	Ser	Met	Pro	Ser	His	Pro	Asp	Arg	Ala	Tyr	Asn	Ser
				200					205					210
Cys	Tyr	Ser	Ala	Gly	Val	Phe	His	Leu	His	Gln	Gly	Asp	Ile	Leu
				215					220					225
Ser	Val	Ile	Ile	Pro	Arg	Ala	Arg	Ala	Lys	Leu	Asn	Leu	Ser	Pro
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His	Gly	Thr	Phe	Leu	Gly	Phe	Val	Lys	Leu					
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<210> 77  
<211> 2849  
<212> DNA  
<213> Homo Sapien

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<210> 78  
<211> 281  
<212> PRT  
<213> Homo Sapien

<400> 78

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				20				25					30	
Gln	Gly	Glu	Gln	Gln	Glu	Trp	Glu	Gly	Thr	Glu	Glu	Leu	Pro	Ser
				35				40					45	
Pro	Pro	Asp	His	Ala	Glu	Arg	Ala	Glu	Glu	Gln	His	Glu	Lys	Tyr
				50				55					60	
Arg	Pro	Ser	Gln	Asp	Gln	Gly	Leu	Pro	Ala	Ser	Arg	Cys	Leu	Arg
				65				70					75	
Cys	Cys	Asp	Pro	Gly	Thr	Ser	Met	Tyr	Pro	Ala	Thr	Ala	Val	Pro
				80				85					90	
Gln	Ile	Asn	Ile	Thr	Ile	Leu	Lys	Gly	Glu	Lys	Gly	Asp	Arg	Gly
					95			100					105	
Asp	Arg	Gly	Leu	Gln	Gly	Lys	Tyr	Gly	Lys	Thr	Gly	Ser	Ala	Gly

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125	130	135
Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser Val		
140	145	150
Gly Arg Lys Lys Pro Met His Ser Asn His Tyr Tyr Gln Thr Val		
155	160	165
Ile Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met		
170	175	180
Phe Thr Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe		
185	190	195
Ser Leu Asn Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His		
200	205	210
Ile Met Lys Asn Glu Glu Val Val Ile Leu Phe Ala Gln Val		
215	220	225
Gly Asp Arg Ser Ile Met Gln Ser Gln Ser Leu Met Leu Glu Leu		
230	235	240
Arg Glu Gln Asp Gln Val Trp Val Arg Leu Tyr Lys Gly Glu Arg		
245	250	255
Glu Asn Ala Ile Phe Ser Glu Glu Leu Asp Thr Tyr Ile Thr Phe		
260	265	270
Ser Gly Tyr Leu Val Lys His Ala Thr Glu Pro		
275	280	

<210> 79

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 79

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<210> 80

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<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 80

ctgaagaagt agaggccggg cacg 24

<210> 81

<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

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<210> 82  
<211> 2284  
<212> DNA  
<213> Homo Sapien

<400> 82  
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tatgcaaaga aacaggttag gacatctagg ttccaattca ttcacattct 2150  
tggttccaga taaaatcaac tgTTTATATC aatttctaatt ggatttgctt 2200  
ttcttttat atggattcct taaaactta ttccagatgt agttccttcc 2250  
aattaaatat ttgaataaaat ctTTTGTtac tcaa 2284

<210> 83

<211> 431

<212> PRT

<213> Homo Sapien

<400> 83

Met Phe Phe Gly Gly Glu Gly Ser Leu Thr Tyr Thr Leu Val Ile  
1 5 10 15

Ile	Cys	Phe	Leu	Thr	Leu	Arg	Leu	Ser	Ala	Ser	Gln	Asn	Cys	Leu
				20					25				30	
Lys	Lys	Ser	Leu	Glu	Asp	Val	Val	Ile	Asp	Ile	Gln	Ser	Ser	Leu
				35				40				45		
Ser	Lys	Gly	Ile	Arg	Gly	Asn	Glu	Pro	Val	Tyr	Thr	Ser	Thr	Gln
				50				55				60		
Glu	Asp	Cys	Ile	Asn	Ser	Cys	Cys	Ser	Thr	Lys	Asn	Ile	Ser	Gly
				65				70				75		
Asp	Lys	Ala	Cys	Asn	Leu	Met	Ile	Phe	Asp	Thr	Arg	Lys	Thr	Ala
				80				85				90		
Arg	Gln	Pro	Asn	Cys	Tyr	Leu	Phe	Phe	Cys	Pro	Asn	Glu	Glu	Ala
				95				100				105		
Cys	Pro	Leu	Lys	Pro	Ala	Lys	Gly	Leu	Met	Ser	Tyr	Arg	Ile	Ile
				110				115				120		
Thr	Asp	Phe	Pro	Ser	Leu	Thr	Arg	Asn	Leu	Pro	Ser	Gln	Glu	Leu
				125				130				135		
Pro	Gln	Glu	Asp	Ser	Leu	Leu	His	Gly	Gln	Phe	Ser	Gln	Ala	Val
				140				145				150		
Thr	Pro	Leu	Ala	His	His	His	Thr	Asp	Tyr	Ser	Lys	Pro	Thr	Asp
				155				160				165		
Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	Phe	Gly	Ser	Ser	Asp
				170				175				180		
His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	Ser	Ala	Gln	Leu
				185				190				195		
Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	Gln	Phe	Ser
				200				205				210		
Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	Ser	Ala
				215				220				225		
Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	Ala
				230				235				240		
Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr
				245				250				255		
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro
				260				265				270		
Val	Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr
				275				280				285		
Val	Phe	Thr	Arg	Ala	Ala	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr	Thr
				290				295				300		
Ala	Val	Leu	Thr	Thr	Thr	Phe	Gln	Ala	Pro	Thr	Ser	Lys	Gly	

305	310	315
Ser Leu Glu Thr Ile Pro Phe Thr Glu Ile Ser Asn Leu Thr Leu		
320	325	330
Asn Thr Gly Asn Val Tyr Asn Pro Thr Ala Leu Ser Met Ser Asn		
335	340	345
Val Glu Ser Ser Thr Met Asn Lys Thr Ala Ser Trp Glu Gly Arg		
350	355	360
Glu Ala Ser Pro Gly Ser Ser Ser Gln Gly Ser Val Pro Glu Asn		
365	370	375
Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu		
380	385	390
Leu Phe Gly Val Leu Phe Leu Val Ile Gly Leu Val Leu Leu Gly		
395	400	405
Arg Ile Leu Ser Glu Ser Leu Arg Arg Lys Arg Tyr Ser Arg Leu		
410	415	420
Asp Tyr Leu Ile Asn Gly Ile Tyr Val Asp Ile		
425	430	

<210> 84  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 84  
agggaggatt atccttgacc tttgaagacc 30

<210> 85  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 85  
gaagcaagtg cccagctc 18

<210> 86  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 86  
cggggtccctg ctctttgg 18

<210> 87  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 87  
caccgttagct gggagcgcac tcac 24

<210> 88  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 88  
agtgtaaatc aagctccc 18

<210> 89  
<211> 49  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 89  
gcttcctgac actaaggctg tctgcttagtc agaattgcct caaaaagag 49

<210> 90  
<211> 957  
<212> DNA  
<213> Homo Sapien

<400> 90  
ccttggaaat gcgcccatgg gctggtgcc tgctcaagggt ggtgttcgtg 50  
gtcttcgcct ctttgtgtgc ctggattcg gggtaacctgc tcgcagagct 100  
catccatgcat gcacccctgt ccagtgctgc ctatagcatc cgccatcg 150  
gggagaggcc tgcctcaaa gtcggatcc ccaaaaggca aaaatgtgac 200  
caactggactc cctgccccatc tgacacctat gcctacagggt tactcagcgg 250  
agggtggcaga agcaagtacg ccaaaatctg ctttgaggat aacctactta 300  
tgggagaaca gctggaaat gttgccagag gaataaacat tgccattgtc 350  
aactatgtaa ctggaaatgt gacagcaaca cgatgttttgc atatgtatga 400  
aggcgataac tctggaccga tgacaaagtt tattcagagt gctgctccaa 450  
aatccctgtc cttcatggtg acctatgacg acggaaagcac aagactgaat 500

aacgatgcc aagaatccat agaagcactt ggaagtaaag aaatcaggaa 550  
catgaaaattc aggtcttagct gggttattat tgccagaaaa ggcttggAAC 600  
tcccttcga aattcagaga gaaaagatca accactctga tgctaagaac 650  
aacagatatt ctggctggcc tgcagagatc cagatagaag gctgcataacc 700  
caaagaacga agctgacact gcagggtcct gagtaaatgt gttctgtata 750  
aacaaaatgca gctggaatcg ctcaagaatc ttattttct aaatccaaca 800  
gcccatattt gatgagtatt ttgggtttgt tgtaaaccAA tgaacatttg 850  
.ctagttgtat caaatcttgg tacgcagtat ttttatacca gtatTTATG 900  
tagtgaagat gtcaattAGC aggaaactaa aatgaatgGA aattcttaaa 950  
aaaaaaaa 957

<210> 91

<211> 235

<212> PRT

<213> Homo Sapien

<400> 91

Met Arg Pro Leu Ala Gly Gly Leu Leu Lys Val Val Val Val  
1 5 10 15

Phe Ala Ser Leu Cys Ala Trp Tyr Ser Gly Tyr Leu Leu Ala Glu  
20 25 30

Leu Ile Pro Asp Ala Pro Leu Ser Ser Ala Ala Tyr Ser Ile Arg  
35 40 45

Ser Ile Gly Glu Arg Pro Val Leu Lys Ala Pro Val Pro Lys Arg  
50 55 60

Gln Lys Cys Asp His Trp Thr Pro Cys Pro Ser Asp Thr Tyr Ala  
65 70 75

Tyr Arg Leu Leu Ser Gly Gly Arg Ser Lys Tyr Ala Lys Ile  
80 85 90

Cys Phe Glu Asp Asn Leu Leu Met Gly Glu Gln Leu Gly Asn Val  
95 100 105

Ala Arg Gly Ile Asn Ile Ala Ile Val Asn Tyr Val Thr Gly Asn  
110 115 120

Val Thr Ala Thr Arg Cys Phe Asp Met Tyr Glu Gly Asp Asn Ser  
125 130 135

Gly Pro Met Thr Lys Phe Ile Gln Ser Ala Ala Pro Lys Ser Leu  
140 145 150

Leu Phe Met Val Thr Tyr Asp Asp Gly Ser Thr Arg Leu Asn Asn  
155 160 165

Asp Ala Lys Asn Ala Ile Glu Ala Leu Gly Ser Lys Glu Ile Arg  
170 175 180

Asn Met Lys Phe Arg Ser Ser Trp Val Phe Ile Ala Ala Lys Gly  
185 190 195

Leu Glu Leu Pro Ser Glu Ile Gln Arg Glu Lys Ile Asn His Ser  
200 205 210

Asp Ala Lys Asn Asn Arg Tyr Ser Gly Trp Pro Ala Glu Ile Gln  
215 220 225

Ile Glu Gly Cys Ile Pro Lys Glu Arg Ser  
230 235

<210> 92

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 92

aatgtgacca ctggactccc 20

<210> 93

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 93

aggcttggaa ctcccttc 18

<210> 94

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

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<400> 94

aagattcttg agcgattcca gctg 24

<210> 95

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 95

aatccctgct cttcatggtg acctatgacg acggaagcac aagactg 47

<210> 96  
<211> 21  
<212> DNA  
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<220>  
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<400> 96  
ctcaagaagc acgcgtactg c 21

<210> 97  
<211> 25  
<212> DNA  
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<220>  
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<400> 97  
ccaacctcag cttccgcctc tacga 25

<210> 98  
<211> 18  
<212> DNA  
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<220>  
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<400> 98  
catccaggct cgccactg 18

<210> 99  
<211> 20  
<212> DNA  
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<220>  
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<400> 99  
tggcaaggaa tggAACAGT 20

<210> 100  
<211> 25  
<212> DNA  
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<220>  
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<400> 100  
atgctgccag acctgatcgc agaca 25

<210> 101  
<211> 19  
<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 101  
gggcagaaat ccagccact 19

<210> 102

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 102  
cccttcgcct gctttga 18

<210> 103

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 103  
gccatctaat tgaagccat cttccca 27

<210> 104

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 104  
ctggcggtgt cctctcctt 19

<210> 105

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 105  
cctcggtctc ctcatctgtg a 21

<210> 106

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 106  
tggcccaagct gacgagccct 20

<210> 107  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 107  
ctcataggca ctcggttctg g 21

<210> 108  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 108  
tggctcccaag cttggaaaga 19

<210> 109  
<211> 30  
<212> DNA  
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<220>  
<223> Synthetic oligonucleotide probe

<400> 109  
cagctttgg ctgtctccag tatgtaccca 30

<210> 110  
<211> 21  
<212> DNA  
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<220>  
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<400> 110  
gatgcctctg ttcctgcaca t 21

<210> 111  
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<220>  
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<400> 111

ggattctaat acgactcaact atagggctgc ccgcaacccc ttcaactg 48  
<210> 112  
<211> 48  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 112  
ctatgaaatt aaccctcaact aaagggaccc cagctgggtg accgtgta 48  
  
<210> 113  
<211> 43  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 113  
ggattctaat acgactcaact atagggccgc cccgccaccc cct 43  
  
<210> 114  
<211> 48  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 114  
ctatgaaatt aaccctcaact aaagggactc gagacaccac ctgaccac 48  
  
<210> 115  
<211> 48  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic oligonucleotide probe  
  
<400> 115  
ggattctaat acgactcaact atagggccca aggaaggcag gagactct 48  
  
<210> 116  
<211> 48  
<212> DNA  
<213> Artificial Sequence  
  
<220>  
<223> Synthetic Oligonucleotide probe  
  
<400> 116  
ctatgaaatt aaccctcaact aaagggacta ggggtggga atgaaaag 48  
  
<210> 117

<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 117  
ggattctaat acgactcaact atagggcccc cctgagctct cccgtgtt 48

<210> 118  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 118  
ctatgaaatt aaccctcaact aaagggaagg ctcgccactg gtcgttaga 48

<210> 119  
<211> 48  
<212> DNA  
<213> Artificial Sequence

<220>  
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<400> 119  
ggattctaat acgactcaact atagggcaag gagccgggac ccaggaga 48

<210> 120  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 120  
ctatgaaatt aaccctcaact aaaggggaggg ggcccttggt gctgagt 47